

**WHAT IS CLAIMED IS:**

03265853-A12005

1. An apparatus for preventing the loss of a portable telephone, comprising:
  - a master communication system having a first short-range radio communication module and a first control section; and
    - a slave communication system having a second short-range radio communication module, wherein said first control section transmits a warning sound signal to the slave communication system to generate a specified warning sound when said first control section determines that a distance between the master communication system and the slave communication system is greater than a predetermined range.
2. The apparatus as claimed in claim 1, wherein the master communication system includes the portable telephone, and the slave communication system includes an earphone.
- 15       3. The apparatus as claimed in claim 1, wherein said master communication system generates said specified warning sound when said first control section determines that the distance between the master communication system and the slave communication system is greater than said predetermined range and there exists a state that no radio communication is established between the master communication system and the slave communication system.
- 20       4. The apparatus as claimed in claim 1, wherein the master communication system and the slave communication system perform radio communications according to

a BLUETOOTH communications protocol.

5. A control method for preventing the loss of a portable telephone, the method comprising the steps of:

5       periodically measuring a power level of a radio frequency received from an earphone when a loss prevention mode is determined in the portable telephone;

      determining whether a calling state exists between the portable telephone and the earphone;

10     transmitting a warning sound signal to the earphone if the power level of the radio frequency received from the earphone is below a predetermined level and the calling state between the portable telephone and the earphone is detected; and

      generating a warning sound in the earphone if the warning sound signal is received from the portable telephone.

15     6. The method as claimed in claim 5, further comprising the step of the portable telephone generating the warning sound if the power level of the radio frequency received from the earphone is below the predetermined level in a state that the calling state between the portable telephone and the earphone is not detected.

20     7. The method as claimed in claim 5, further comprising the step of the portable telephone periodically measuring the power level of the radio frequency received from the earphone when a hands-free mode is determined in the portable telephone.

      8. The method as claimed in claim 5, wherein the portable telephone and the earphone perform radio communications according to a BLUETOOTH communications

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## Protocol

9. The method as claimed in claim 5, further comprising the step of generating  
said warning signal, via said portable telephone, when the distance between the portable  
5 telephone and the earpiece is greater than a predetermined range and no radio  
communication exists there between.

10. An apparatus for preventing the loss of a portable telephone, comprising:

a master communication system having a short-range radio communication module; and

a slave communication system having another short-range radio communication module which is different from the short-range radio communication module of the master so that the slave performs a bluetooth communication with the master; wherein if it is detected that a distance between the master and the slave is greater than a predetermined range, the master transmits a warning sound signal to the slave to generate a specified warning sound.